Dazzle

Real-Time Video Producer

User’s Guide

Dazzle*

An SCM Microsystems Brand

www.Dazzle.com

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Revision B

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Introduction

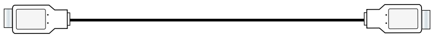
Congratulations!

You have just purchased the Dazzle Professional Series Real-Time Video Producer™!

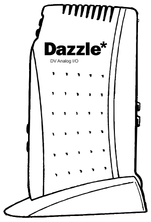
The Real-Time Video Producer is a professional video solution that increases your productivity by offering genuine real-time performance with industry-leading video editing and DVD production tools. Unlike solutions that are limited by hardware, the Real-Time Video Producer provides software-based real-time performance that exploits the full potential of today's ultra fast PCs.

The heart of the Real-Time Video Producer is Dazzle's Native Video Pipeline™ technology that allows you to do true real-time video editing in Adobe® Premiere®. With the Dazzle Native Video Pipeline Plug-Ins, you can do all your real-time editing, and then output analog video to tape in real time. After completing your project, you can also design and produce DVDs using the award-winning Dazzle DVD Complete Deluxe™ software. In addition, the Real-Time Video Producer's DV Analog I/O breakout box provides you with convenient desktop access to all the DV and analog input/output connectors. DV Analog I/O takes the complexity out of setting up a Video Editing Studio.

What’s Included

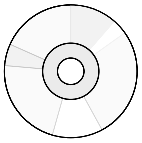


6 pin to 6 pin 1394/FireWire/i.LINK Cable

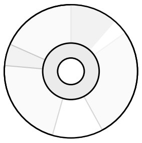


DV Analog I/O Breakout Box

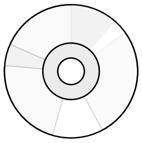
Stand



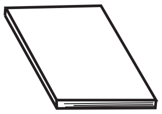
Dazzle Software CD



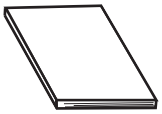
Adobe Premiere CDs



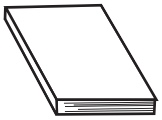
Boris FX LTD CD



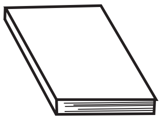
Real-Time Video Producer
Quickstart Guide



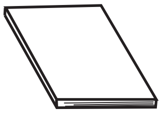
Real-Time Video Producer
User’s Guide



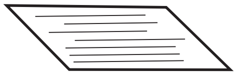
Adobe Premiere
User Guide



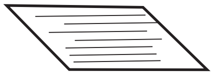
DVD Complete
User’s Guide



Boris FX LTD
User’s Guide



Registration Cards and Related
Documentation for Real-Time Video
Producer, Boris F/X LTD,
and Adobe Premiere

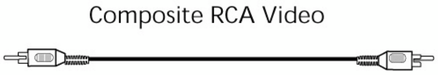


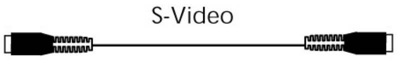
Warranty Card

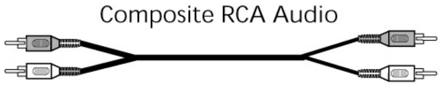
Note: Users’ guides are provided in hard copy and/or as electronic files.

Other Items You Might Need

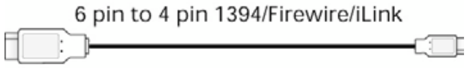
The following video input/output cables are not included with the Real-Time Video Producer's DV Analog I/O breakout box. They are usually included with most camcorders and VCRs.







To connect most DV camcorders to the Real-Time Video Producer DV Analog I/O breakout box, you'll also need a 6 pin to 4 pin 1394/FireWire/i.LINK cable, which is usually included with the camcorder.



You'll need extra cables if you want to connect input and output devices to the DV Analog I/O breakout box at the same time (for convenience).

You may need other types of cables if you want to connect additional devices to those that are connected to the DV Analog I/O breakout box. For example, if you are outputting to a VCR, you may want to connect a TV monitor to the VCR to view your material. This requires the right kind of cable, which varies depending on the VCR and monitor. It may be necessary to use a coaxial video cable, which is usually included with VCRs.

To use the DV Analog I/O breakout box with an analog device that only supports mono audio, you need a Y-adapter to enable connection of left and right audio cables.
A Y-adapter cannot convert mono to stereo, but it prevents the sound from only being audible in the left or right channel.

The above items are widely available in electronics stores.

About This Guide

This Guide explains how to use the Dazzle Real-Time Video Producer. Following is a description of each section:

“Getting Started” lists the minimum system requirements for the Real-Time Video Producer, provides a hardware and software overview, and describes the software and hardware installation process.

“Capturing Video” explains how to connect video input, set up an optional preview monitor for an input configuration, and configure the Dazzle Analog Capture Settings.

“Editing Video” explains how to configure your system for Real-Time Editing and Playback, and shows you how to export your project in MPEG-2 format for DVD creation.

“Outputting Video” describes how to connect video output, set up an optional preview monitor for an output configuration, and output video to your VCR or camcorder.

“Troubleshooting” provides solutions to possible problems and answers frequently asked questions.

“Technical Support” explains how to obtain technical assistance from the Dazzle Interactive Knowledgebase.

Getting Started

Minimum System Requirements

Processor: Pentium® 4, 1.7 GHz or better (or equivalent processor)

Operating system: Windows® 2000 or XP

RAM: 256 MB minimum, DDR or RD RAM

Hard disk(s): 500 MB free disk space for software installation, 20-40 GB for video capture and editing.

Monitor: 1024 x 768 pixel resolution, 24 bit color, DirectX 8 or above

Sound: Standard sound card

Interface: IEEE 1394 for DV Analog I/O connection

CD-ROM or DVD-ROM Drive: For software installation

CD or DVD burner For VCD, DVD creation

***Optional External Preview Monitor**

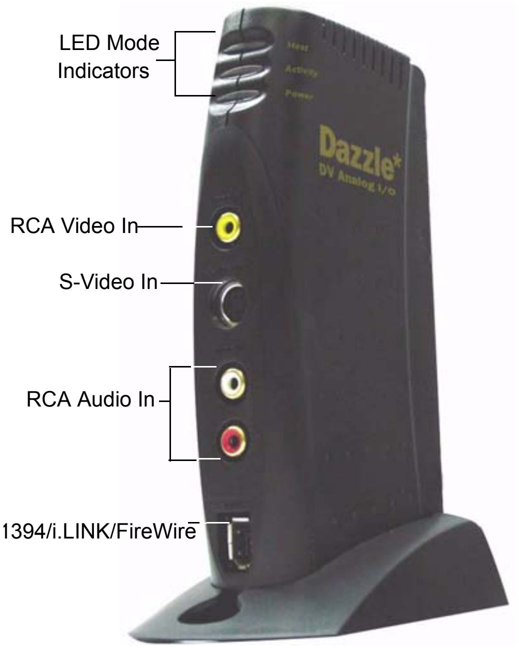
Additional Requirements

To fine-tune your system for digital video editing, follow these steps:

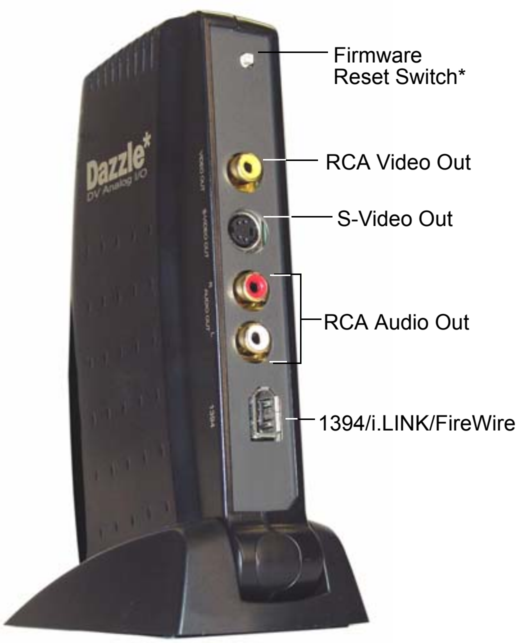
1. Make sure all your hard disk drives are defragmented.
2. If possible, use a separate drive for storing video material (7200 RPM, NTFS filesystem recommended).
3. Close all unnecessary programs and background tasks before beginning.
4. An AGP video card that does not use a shared memory design is recommended for performance.

Hardware Overview

The Real-Time Video Producer's DV Analog I/O breakout box takes the complexity out of setting up a Video Editing Studio. Connect one 6-pin 1394 cable from the Dazzle DV Analog I/O breakout box to your computer's 1394 port. That's it. No opening your PC. No messy interrupts to set. The Dazzle DV Analog I/O breakout box allows you to capture from and output to any analog or DV source. The convenient external design allows direct desktop access to all the input/output connectors, so there is no need to fumble behind your PC to connect audio and video cables.



DV Analog I/O Breakout Box/Front View



DV Analog I/O Breakout Box/Rear View

***Do not** press the Firmware Reset Switch unless you are following the directions included with a Dazzle firmware update. Improper use of the Firmware Reset Switch will render the DV Analog I/O breakout box inoperable. If you accidently press the switch, follow the instructions on page 43 to re-enable the hardware.

Check for DV Analog I/O firmware updates on the Dazzle website (www.dazzle.com).

LED Mode Indicators

The three LED Mode Indicators are defined below:

Top - Host detected

Middle - Video detected.

Bottom - Power detected

Software Overview

The Dazzle Real-Time Video Producer™ includes four PC software applications: Adobe® Premiere®, Dazzle Real-Time Native Video Pipeline™ Plug-Ins for Adobe Premiere, Dazzle DVD Complete Deluxe™, and Boris FX LTD™. Following is a description of each of these software applications.

Adobe Premiere 6.5

Adobe Premiere provides a complete editing environment to create and deliver professional, polished video productions. New version 6.5 includes the new Adobe Title Designer to create Broadcast quality title sequences.

Dazzle Real-Time Native Video Pipeline Plug-Ins

With Dazzle's Native Video Pipeline technology, you can do true real-time video editing in Adobe Premiere. Instead of editing video in the PC's RGB format, you can work in broadcast video's native YUV format. The result is multiple streams of real-time video production in perfectly preserved color. And since the Native Video Pipeline is software-based, performance is never limited by add-in hardware. The more real-time performance, the more creative you can be!

Dazzle DVD Complete Deluxe 2.0

After finishing your video editing, use the award-winning Dazzle DVD Complete Deluxe software to design and produce interactive DVDs.

Boris FX LTD

Boris FX LTD adds a customizable library of advanced effects to Adobe Premiere. Filters include color, blur, particles, noise, and keying. Boris FX LTD also supports third-party After Effects plug-ins.

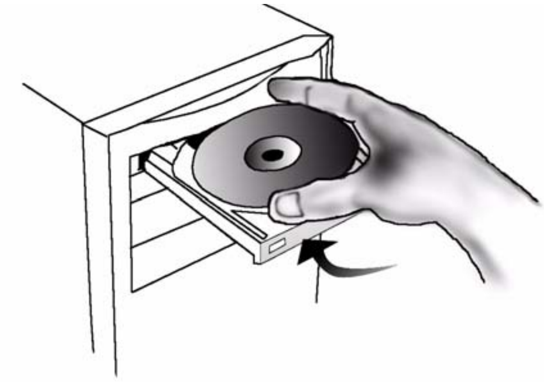
Note: You can access an electronic user's guide for the Real-Time Video Producer, Dazzle DVD Complete Deluxe, and Boris FX LTD by selecting **Start**>**Programs,** selecting the name of the desired product, and then selecting the user's guide for that product. The Adobe Premiere User Guide is provided only in hard copy.

Software Installation

To install the required software included with the Real-Time Video Producer, follow the steps below. To perform a successful installation of the plug-ins and the hardware, you must follow the steps in order:

1. Insert the provided Adobe Premiere 6.5 Installation CD in your computer's CD-ROM/DVD-ROM drive, then follow the InstallShield Wizard's screen instructions.

   For detailed installation instructions, see the *HowToInstall* file on the CD.

   The InstallShield Wizard installs Adobe Premiere, and then prompts you to restart.

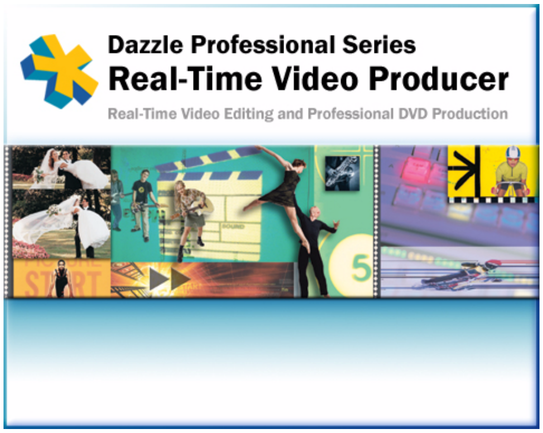
2. Restart your system.

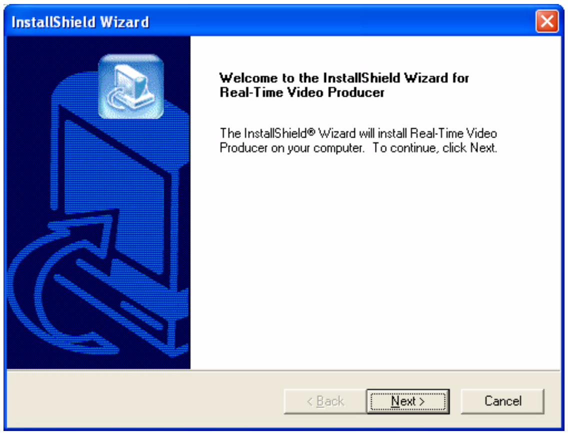
   If you do not have Adobe Acrobat Reader 5.0 installed on your system, use the Adobe Premiere 6.5 Installation CD to install it. You'll need this application to read the electronic users' guides.

3. Remove the Premiere Installation CD from your computer's CD-ROM/DVD-ROM drive.

4. Insert the provided Real-Time Video Producer Installation CD in your computer's CD-ROM/DVD-ROM drive.

   The Real-Time Video Producer splash screen appears, followed by the InstallShield Wizard Welcome screen.


Dazzle Professional Series
Real-Time Video Producer
Real-Time Video Editing and Professional DVD Production

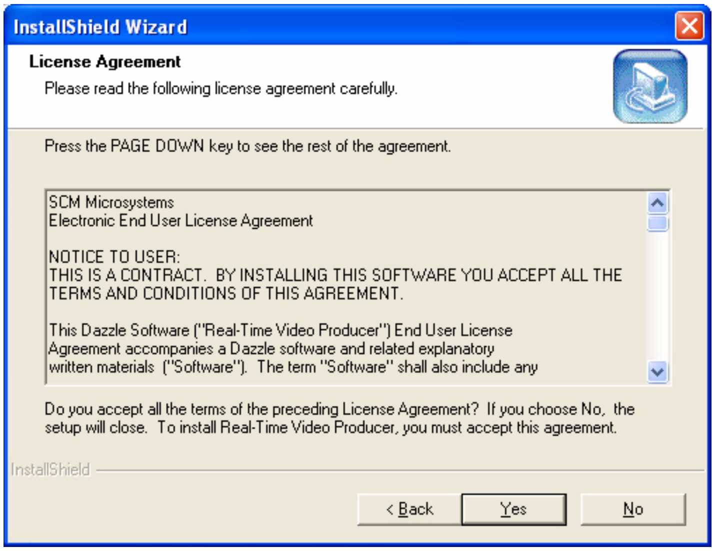


Welcome to the InstallShield Wizard for Real-Time Video Producer

The InstallShield® Wizard will install Real-Time Video Producer on your computer. To continue, click Next.

5. Click **Next** in the Welcome screen.

   The License Agreement screen appears. To use the Real-Time Video Producer, you must agree to the terms of the license.



License Agreement

Please read the following license agreement carefully.

Press the PAGE DOWN key to see the rest of the agreement.

SCM Microsystems
Electronic End User License Agreement

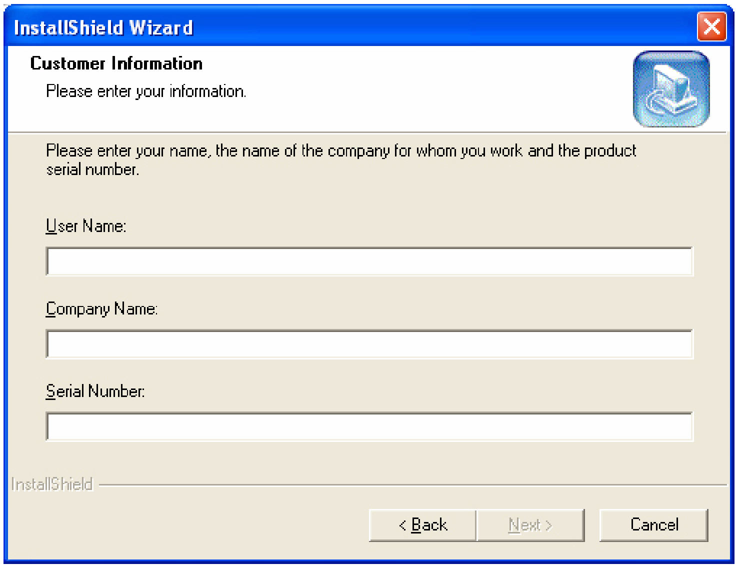
NOTICE TO USER:
THIS IS A CONTRACT. BY INSTALLING THIS SOFTWARE YOU ACCEPT ALL THE TERMS AND CONDITIONS OF THIS AGREEMENT.

This Dazzle Software ("Real-Time Video Producer") End User License Agreement accompanies a Dazzle software and related explanatory written materials ("Software"). The term "Software" shall also include any

Do you accept all the terms of the preceding License Agreement? If you choose No, the setup will close. To install Real-Time Video Producer, you must accept this agreement.

6. Click **Yes** to accept the license agreement.

   The Customer Information screen appears.



Customer Information

Please enter your information.

Please enter your name, the name of the company for whom you work and the product serial number.

User Name:

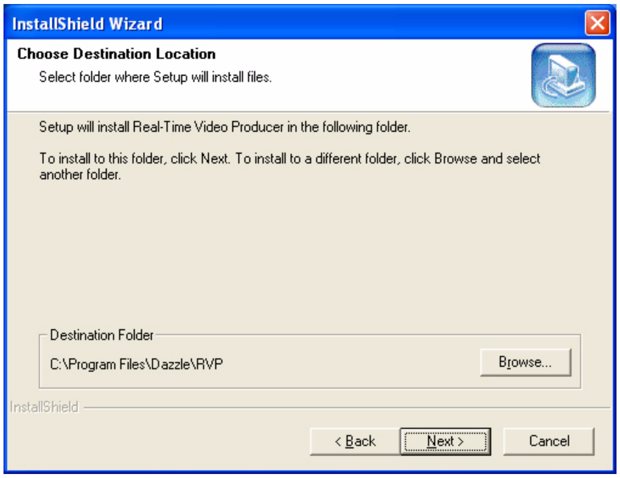
Company Name:

Serial Number:

7. Enter your name, company name, and serial number, then click **Next**.

The Choose Destination Location screen appears. This screen allows you to specify the location for the Real-Time Video Producer files.

8. Accept the default settings, or click the **Browse** button to choose a different location, and click **Next**.



Choose Destination Location

Select folder where Setup will install files.

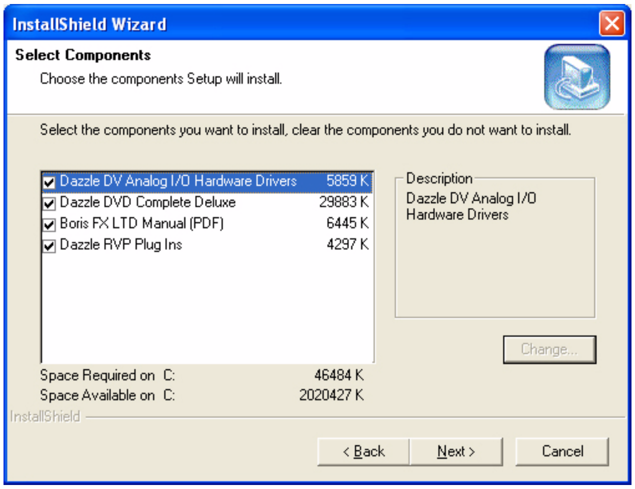
Setup will install Real-Time Video Producer in the following folder.

To install to this folder, click Next. To install to a different folder, click Browse and select another folder.

Destination Folder

C:\Program Files\Dazzle\RVP

The Select Components screen appears. This screen allows you to select the driver and software applications you want to install. **Dazzle strongly recommends installing all the software.** The DV Analog I/O Drivers and the Dazzle RVP Plug-Ins are required for Real-Time video editing. DVD Complete Deluxe is required to design and produce DVDs. The Boris FX LTD Manual is provided only as an electronic (PDF) file.



Select Components

Choose the components Setup will install.

Select the components you want to install, clear the components you do not want to install.

☑ Dazzle DV Analog I/O Hardware Drivers	5859 K
☑ Dazzle DVD Complete Deluxe	29883 K
☑ Boris FX LTD Manual (PDF)	6445 K
☑ Dazzle RVP Plug Ins	4297 K

Description

Dazzle DV Analog I/O Hardware Drivers

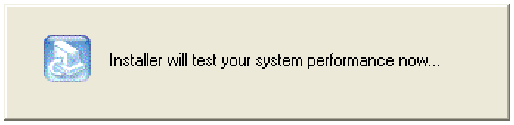
Space Required on C: 46484 K
Space Available on C: 2020427 K

9. Select the desired software and click **Next**.

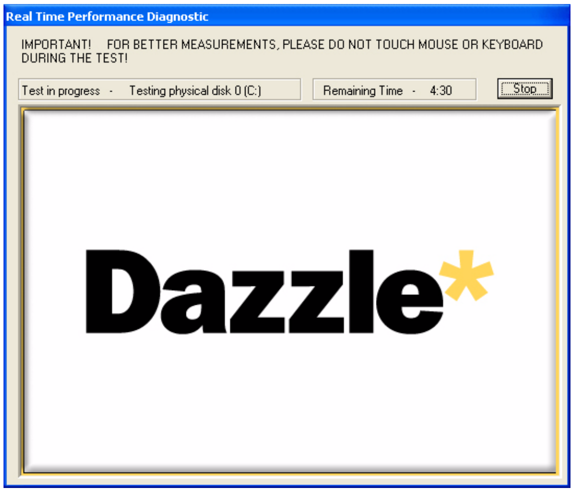
The InstallShield Wizard installs the specified components.

After installing all the software, a message tells you that the Installer will test your system performance, then the Real-Time Performance Diagnostic Utility appears. This utility runs a series of test videos, which check your system's real-time editing capability. The utility takes several minutes to complete. Please do not use the mouse or keyboard during the test.

Note: After the software installation, you can run this utility at any time by selecting **Start**>**Programs**>**Dazzle RVP**>**Real-Time Performance Diagnostic**.



Installer will test your system performance now...



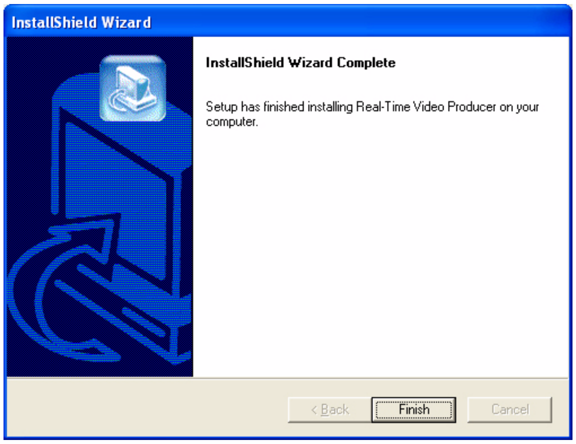
Real Time Performance Diagnostic

IMPORTANT! FOR BETTER MEASUREMENTS, PLEASE DO NOT TOUCH MOUSE OR KEYBOARD DURING THE TEST!

Test in progress - Testing physical disk 0 (C:)

Remaining Time - 4:30

After the test utility completes the real-time playback testing, the InstallShield Wizard confirms a successful installation.



InstallShield Wizard

InstallShield Wizard Complete

Setup has finished installing Real-Time Video Producer on your computer.

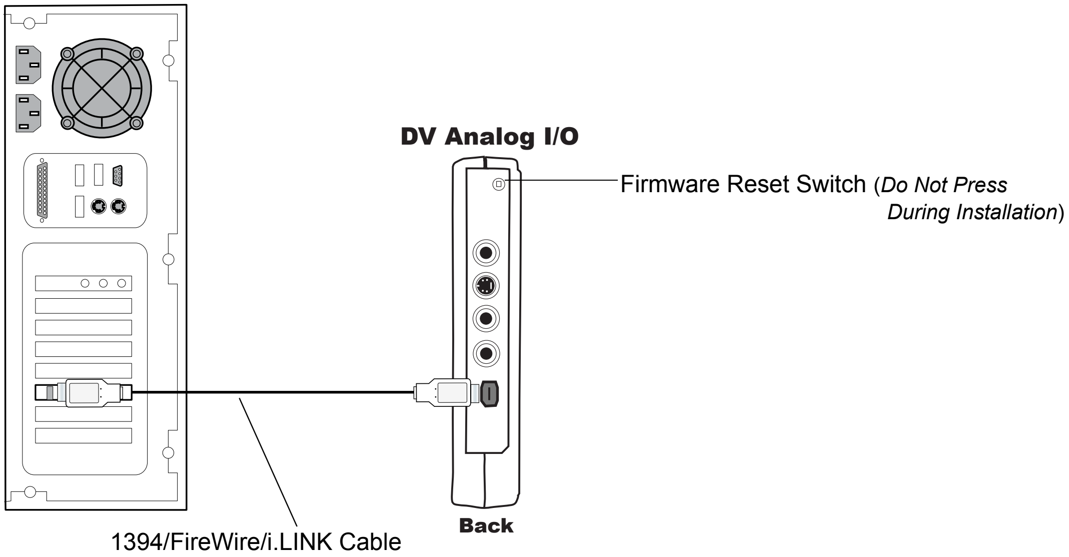
10. Click the Finish button to close the InstallShield Wizard.

11. Insert the Boris FX LTD CD and follow the screen instructions to install the software.

Hardware Installation

After you install the Real-Time Video Producer software you can install the DV Analog I/O breakout box, as described below.

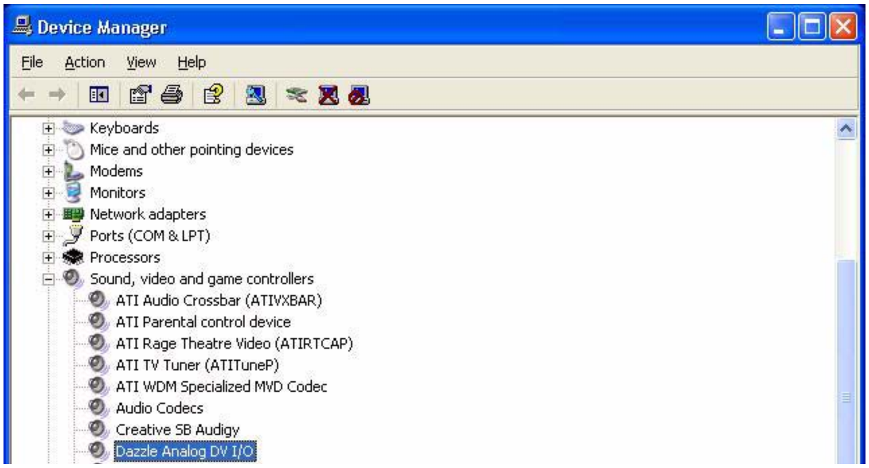
Connect the 1394/FireWire/i.LINK cable from the back of the DV Analog I/O breakout box to an available 1394 port on your computer.


DV Analog I/O
Firmware Reset Switch (*Do Not Press During Installation*)
Back
1394/FireWire/i.LINK Cable

Important: Do not press the Firmware Reset Switch unless you are following the directions included with a Dazzle firmware update. Improper use of the Firmware Reset Switch will render the DV Analog breakout box inoperable. If you accidently press the switch, follow the instructions on page 43 to re-enable the hardware.

Note: The DV Analog I/O breakout box uses analog video drivers that are installed during the software installation. The DV drivers are built into your operating system. Once the unit is connected to your computer and powered on, the PC should recognize it and load the appropriate drivers automatically. You can verify whether the DV Analog I/O breakout box is installed properly by checking the Windows Device Manager. The unit should appear under the "Sound, video, and game controllers" category as "Dazzle Analog DV I/O," or "Dazzle DV Analog I/O," or a similarly-named device. If the unit does not appear in the "Sound, Video, and Game Controllers" category, disconnect the 1394 cable, and then reconnect it. If this does not work, check your hardware's documentation to see if a third-party DV camcorder driver is installed, and whether instructions are provided on how to remove the driver.

For detailed information on the Device Manager, please refer to your Windows Help documentation.


Device Manager
File
Action
View
Help
Keyboards
Mice and other pointing devices
Modems
Monitors
Network adapters
Ports (COM & LPT)
Processors
Sound, video and game controllers
ATI Audio Crossbar (ATIVXBAR)
ATI Parental control device
ATI Rage Theatre Video (ATIRTCAP)
ATI TV Tuner (ATITuneP)
ATI WDM Specialized MVD Codec
Audio Codecs
Creative SB Audigy
Dazzle Analog DV I/O

For up-to-date driver troubleshooting information, visit Dazzle's Interactive Knowledgebase, as described on page 44 of this guide.

Capturing Video

This section explains how to capture video from an analog or DV source, such as a camcorder, VCR, or TV. You'll learn how to set up the DV Analog I/O breakout box (referred to as DV Analog I/O) for DV or analog video input and convert analog video to the Dazzle format for use on your computer. The Dazzle capture format is similar to the DV and MPEG-2 formats but provides additional capabilities, as described on page 20. After the capture process, you can use your computer to edit the video and create special effects in real time. Before you start capturing, make sure the DV Analog I/O is connected to your computer and powered up. Then follow the procedures below.

Connecting Analog Video Input

To connect your camcorder, VCR, or TV to the DV Analog I/O to capture digital video, follow these steps:

1. Connect one end of an RCA (composite) video cable (yellow) or S-video cable (black) to the corresponding Video Out connector on your analog camcorder, VCR, or TV.

   S-Video provides higher quality video capture than composite video, and should be used if the analog device has an S-Video output.

   Note: Some TVs do not have Video Out connectors. For specific details, check the documentation included with your TV.

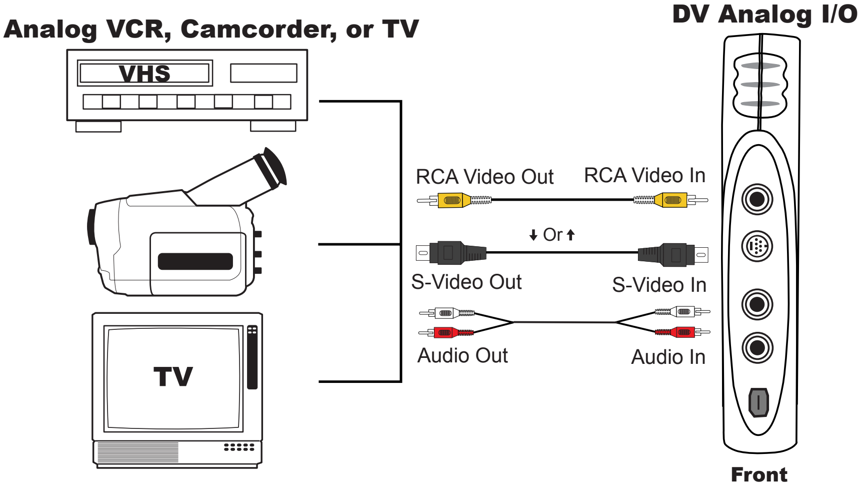
2. Connect the other end of the video cable to the corresponding Video In connector on the front of the DV Analog I/O.

   Note: Some camcorders do not have connectors for standard video cables. If your camcorder is not compatible with standard video cables, use the cables that were included with the camcorder.

3. Connect an RCA audio cable (red and white) from the Audio Out connector(s) on the analog camcorder, VCR, or TV to the Audio In connectors on the front of the DV Analog I/O.

   Note: You may have separate audio cables for the left and right connectors, or the connectors might be joined into one cable as shown in the illustration on page 17. Remember that you need to use a Y-adapter if the analog camcorder or VCR only supports mono output.

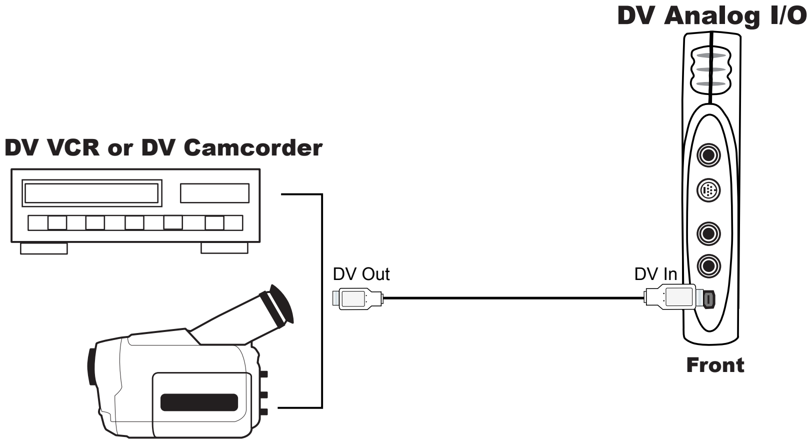
The illustration on page 17 shows the above configuration.



Connecting DV Input

If you have a DV camcorder or VCR, there may be times when you want to capture DV material directly into your computer, then edit your project and output the edited video to the desired output device. Since no conversion is performed during the capture operation, it is not necessary to use the DV Analog I/O for this process. You can connect your DV device directly to your PC. However, it may be more convenient to capture DV through the DV Analog I/O. If your computer is not in a convenient location, it may be easier to simply connect the DV device to the DV Analog I/O as follows:

1. Connect one end of a 1394/FireWire/i.LINK cable to the 1394 connector on the front of the DV Analog I/O.
2. Connect the other end of the cable to the DV connector on the DV camcorder or VCR.



Connecting an Optional Preview Monitor

Although you can preview your video in Adobe Premiere, you may prefer to view it at full size on a TV monitor. There are two ways to connect a preview monitor.

Method A: During the analog or DV capture process, if the DV Analog I/O is not connected for video output to an analog device, connect the TV monitor as follows:

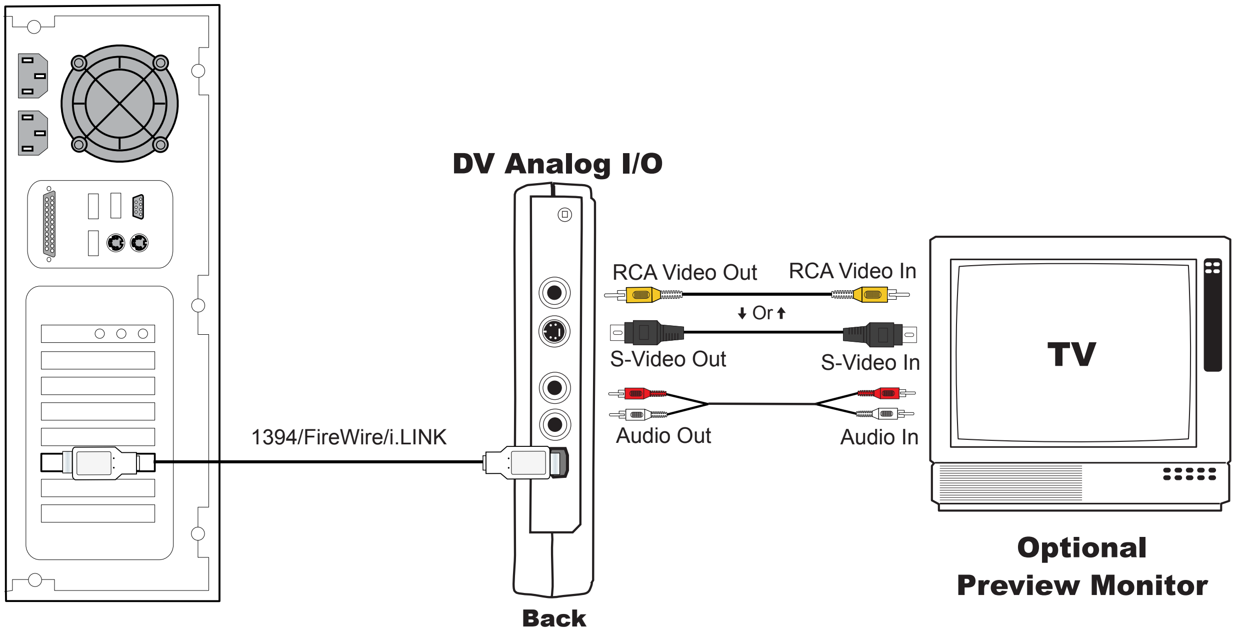
1. Connect one end of an RCA video cable (yellow) or S-video cable (black) to the corresponding Video Out connector on the back of the DV Analog I/O.
2. Connect the other end of the video cable to the corresponding Video In connector on your TV monitor.

   Note: Some older model TVs may not have Video In connectors. For specific details, check the documentation included with your TV.

3. Connect an RCA audio cable (red and white) from the Audio Out connectors on the back of the DV Analog I/O to the Audio In connector(s) on the TV monitor.

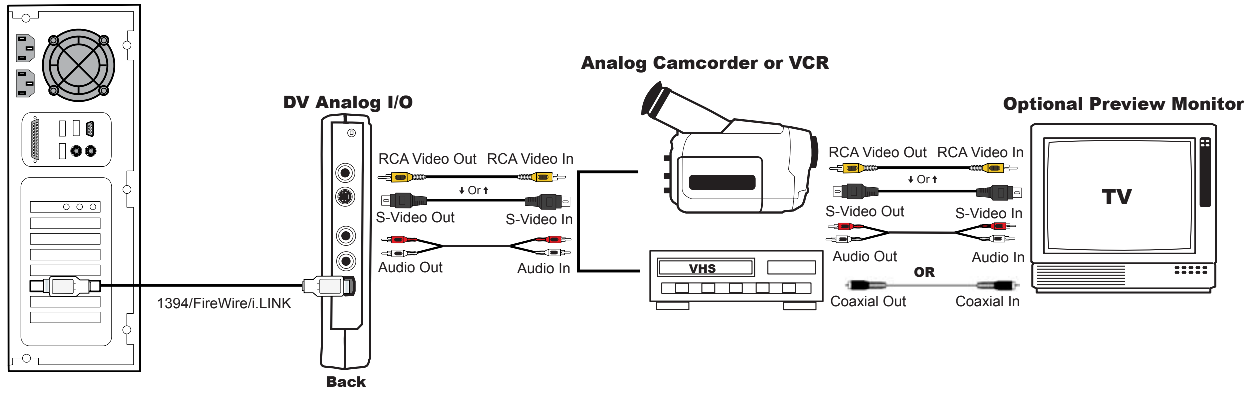
   Note: Your audio cable may have separate connectors for left and right, or the connectors might be joined as shown in the illustration below. Remember that you need to use a Y-adapter if the monitor only supports mono input.

   IMPORTANT: Make sure that the monitor is set up properly to receive a video signal. It may need to be set to "Line In," "L1," "L2," "Aux" or a similar channel. Check the monitor's documentation for specific details.



Method B: During the capture process, if the DV Analog I/O is connected for video output to an analog device, connect the TV monitor to the analog device. This process is explained later in this user's guide, in the "Outputting Video" section. This method may be helpful if your TV monitor does not have the kinds of video and audio connectors described above. You may be able to connect the monitor to an analog output device such as a VCR by using a coaxial cable.

Method B results in the configuration shown below.



IMPORTANT: Make sure that the camcorder or VCR and TV monitor are set up properly to receive a video signal. It may be necessary to set a camcorder to VTR mode, while a VCR or monitor might need to be set to "Line In," "L1," "L2," "Aux" or a similar channel. Or, if the monitor is connected to a VCR with a coaxial cable, you may need to set the monitor to channel 3 or 4. Check each device's documentation for specific details.

Configuring the Dazzle Analog Capture Settings

This section shows you how to configure the Dazzle Analog Capture Settings in Adobe Premiere. These settings allow you to convert analog video to the Dazzle format, which is required for real-time editing and playback. After capturing analog video, you can use it in an analog project or combine it with DV segments in the same project. In either case, you can edit your video in real time.

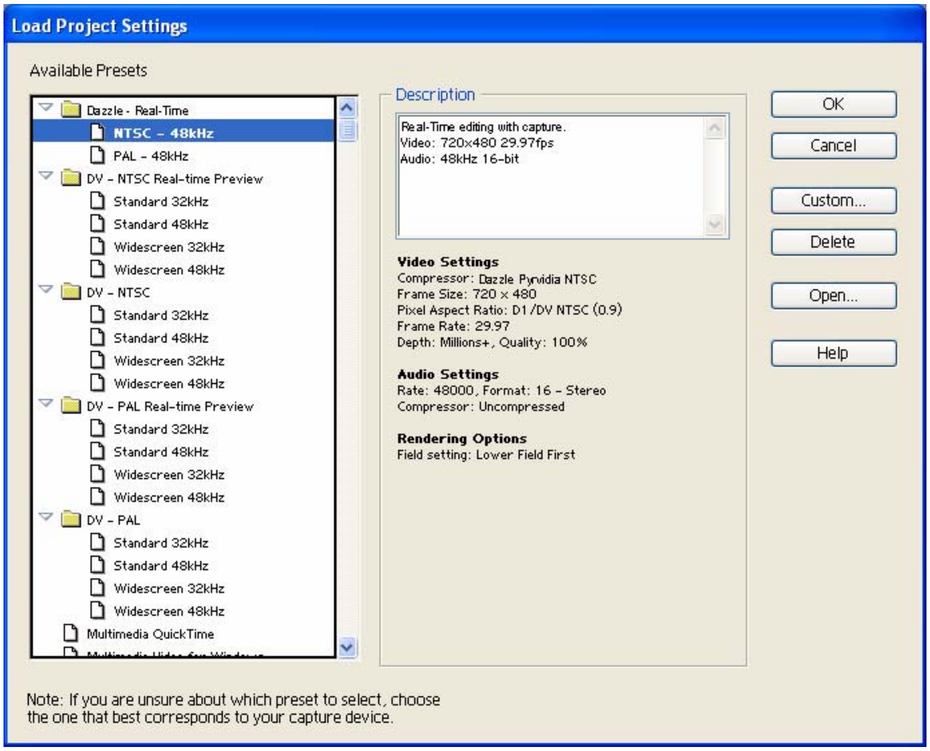
Note: DV segments are real-time capable regardless of the capture method. Although you can begin with an existing DV project, the procedure below assumes you are setting up a new project for analog video capture. Any differences for DV are noted throughout the procedure.

Following are step-by-step instructions for setting up a new project for analog video capture and a look at all the Dazzle Analog Capture settings.

1. Launch Adobe Premiere 6.5 by selecting **Start**>**Programs**>**Adobe**>**Premiere 6.5>Adobe Premiere 6.5**.

   The Load Project Settings dialog box appears. In this window, you can load a new project with the Dazzle - Real-Time preset. This preset automatically activates the Dazzle Real-Time Capture and Editing settings.

   Note: If you are working with a previously created DV project, you do not have to load a new preset. You can use the current DV preset and switch to Dazzle RT Editing mode, as explained on page 27.



Real-Time editing with capture.
Video: 720x480 29.97fps
Audio: 48kHz 16-bit

Video Settings
Compressor: Dazzle Pyrvidia NTSC
Frame Size: 720 x 480
Pixel Aspect Ratio: D1/DV NTSC (0.9)
Frame Rate: 29.97
Depth: Millions+, Quality: 100%

Audio Settings
Rate: 48000, Format: 16 - Stereo
Compressor: Uncompressed

Rendering Options
Field setting: Lower Field First

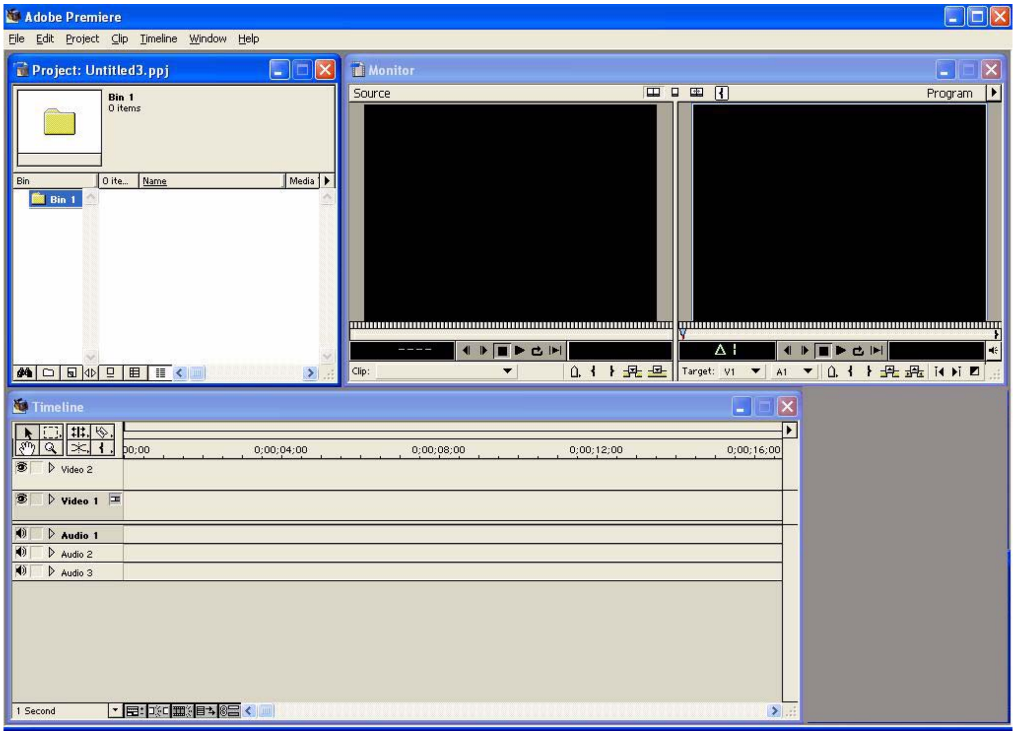
Note: If you are unsure about which preset to select, choose the one that best corresponds to your capture device.

2. Open the **Dazzle - Real-Time** folder, choose **NTSC or PAL**, and then click **OK**.

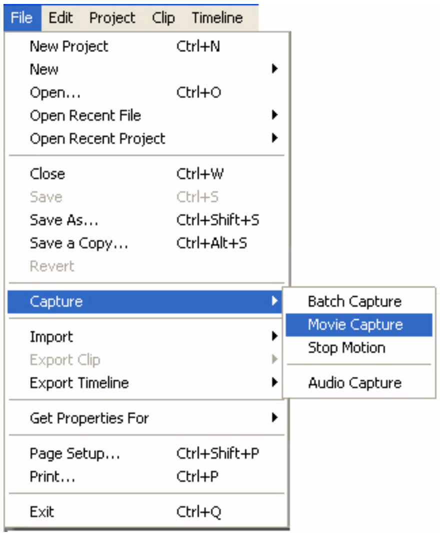
A description of the Dazzle Real - Time preset (Real-Time Editing with capture) appears in the Load Project Settings window. The Dazzle preset specifies analog video input for your project utilizing the Dazzle Native Video Pipeline, which converts analog video to the Dazzle format. The Dazzle presets also enable real-time editing/playback and other special capabilities, which are not provided by the other presets.

The current Video and Audio Settings and the Rendering Options appear below the Dazzle - Real-Time preset description. You can modify the default Dazzle setup and customize the Dazzle - Real-Time preset, as described on the following pages.

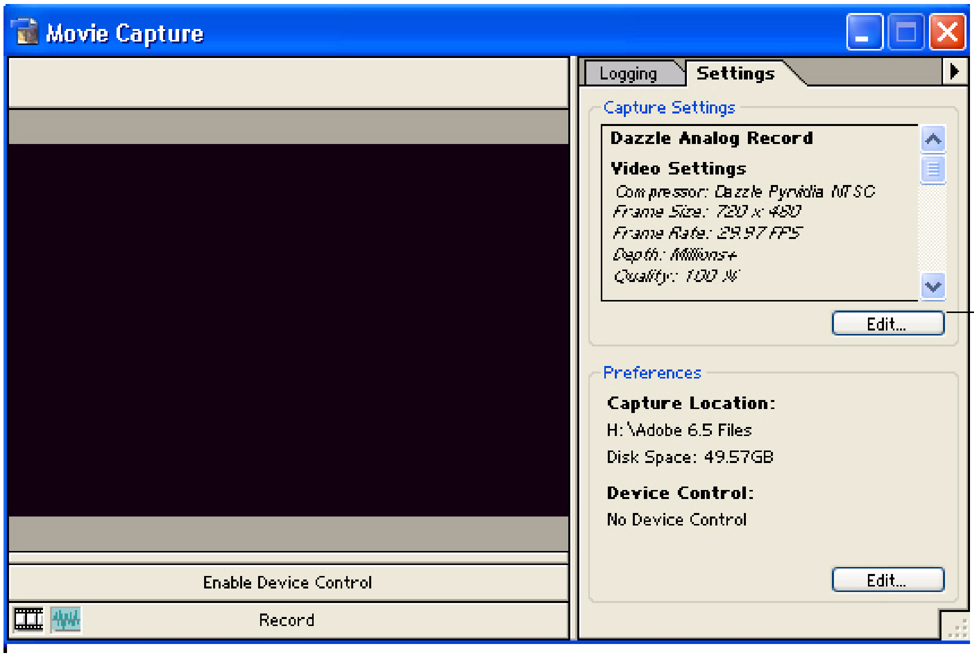
After you click OK, The Premiere Project Workspace appears. For a detailed description of the Project Workspace, see your *Adobe Premiere User Guide.*



3. Choose **Capture** from the File Menu, then click **Movie Capture** in the pop-up menu.



The Movie Capture window appears. In this window, you can edit the current Dazzle analog capture settings. When you select the **Dazzle - Real-Time** preset in the Load Project Settings window, as described on page 20, the capture settings specify an analog source using the default Dazzle settings. This is the setting you must use to capture analog video for the Dazzle Native Video Pipeline.



Dazzle Analog Record

Video Settings
Compressor: Dazzle Pyridia NTSC
Frame Size: 720 x 480
Frame Rate: 29.97 FPS
Depth: Millions+
Quality: 100 %

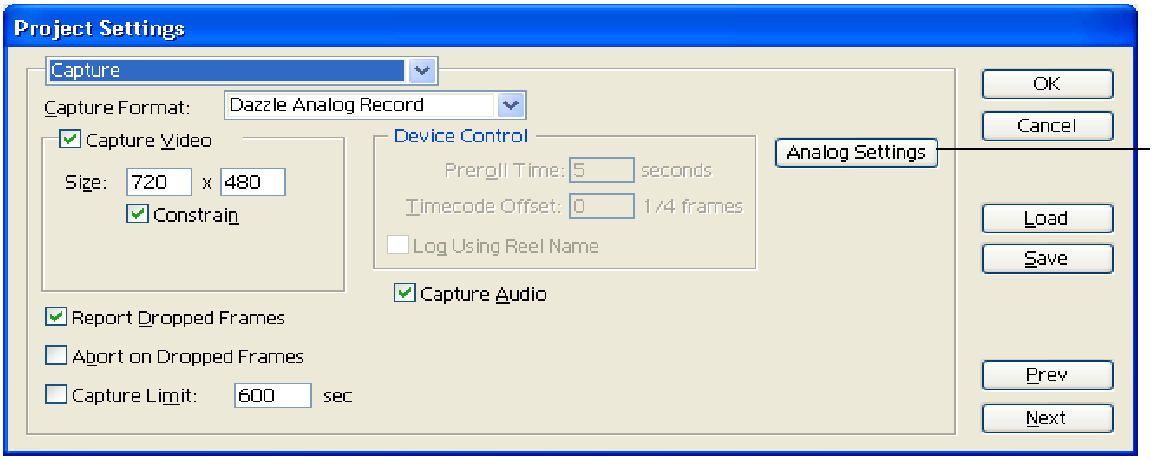
Capture Location:
H:\Adobe 6.5 Files
Disk Space: 49.57GB

Device Control:
No Device Control

Capture Settings
Edit Button

4. Click the Capture Settings **Edit** button in the Movie Capture window.

   The Project Settings dialog box displays **Dazzle Analog Record** as the Capture format.



Capture

Capture Format: Dazzle Analog Record

☑ Capture Video

Size: 720 x 480

☑ Constrain

Device Control

Preroll Time: 5 seconds

Timecode Offset: 0 1/4 frames

☐ Log Using Reel Name

☑ Capture Audio

☑ Report Dropped Frames

☐ Abort on Dropped Frames

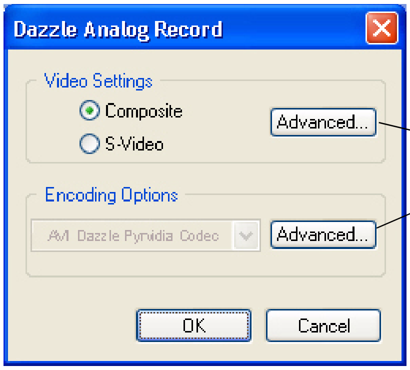
☐ Capture Limit: 600 sec

Analog Settings Button

5. For video capture from an analog source, click the **Analog Settings** button in the Project Settings dialog box.

   The Dazzle Analog Record dialog box appears. In this window, you can configure your analog capture settings, for example, if you want to capture from the Composite (RCA) or S-Video input. You can also configure the Advanced **Video Settings** and the Advanced **Encoding Options**.

   Note: If you want to capture from a DV source, change the Capture Format to **DV IEEE/1394 Capture** in the Project Settings dialog box. In DV mode, you'll need to use the standard DV capture settings instead of the Dazzle settings (for more information on DV capture, see your *Adobe Premiere User Guide)*.



Video Settings

● Composite

○ S-Video

Encoding Options

AVI Dazzle Pyridia Codec

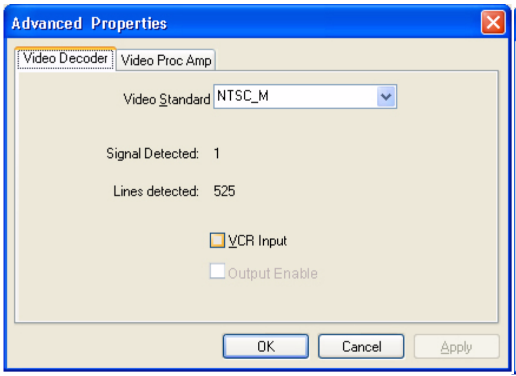
Advanced Buttons

6. Click the Video Settings **Advanced** button.

   The Advanced Properties dialog box appears, displaying the Video Decoder settings. These settings control the DV Analog I/O chip, which decodes and digitizes analog video during the capture process.

   The **Video Standard** setting specifies the **NTSC** or **PAL** standard for your analog video capture.

   The **VCR Input** setting provides you with the option of increasing the DV Analog I/O's tolerance for low quality video captures. For example, if you enable VCR Input, DV Analog I/O will apply more effort when attempting to capture video from old VHS tape that was stored on the shelf for a long time.



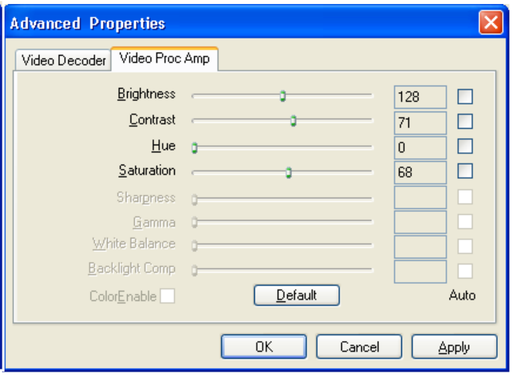
Video Standard NTSC_M

Signal Detected: 1

Lines detected: 525

☐ VCR Input

☐ Output Enable



Brightness 128 ☐

Contrast 71 ☐

Hue 0 ☐

Saturation 68 ☐

Sharpness ☐

Gamma ☐

White Balance ☐

Backlight Comp ☐

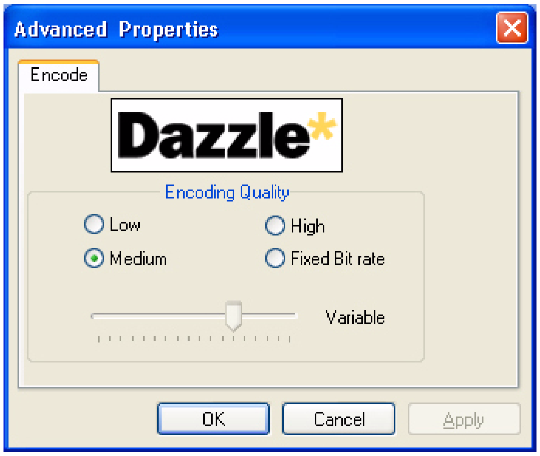
ColorEnable ☐

7. Click the **Video Proc Amp** (Video Processing Amplifier) tab in the Advanced Properties dialog box.

   This setting allows you to set the analog video levels for Brightness, Contrast, Hue, and Saturation before digitizing, to improve the capture quality. For example, for a low contrast video, you can increase the contrast before the sampling process. This a very advanced setting and you should be sure of your settings before changing the defaults. In any case, you should not change the default Hue setting, except to create a special effect.

8. Click the Encoding Options **Advanced** button.

The Dazzle Encoding settings appear. With these settings, you can configure the encoding quality for your analog video capture.



○ Low ○ High
● Medium ○ Fixed Bit rate

You can choose from four encoding options: **Low**, **Medium**, **High**, and **Fixed Bit rate**.

The **Low**, **Medium**, and **High** options specify that the bit rate will vary within a given range, depending on the image content.

The default encoding quality is **Medium** (approximately 12-24 Mbits/sec)**,** which is recommended for corporate or industrial quality output**.** Medium consumes less disk space than the High option.

The **High** option (approximately 15-30 Mbits/sec) is recommended for broadcast quality video (best quality).

The **Low** option (approximately 10-20 Mbits sec) is recommended for offline, Web, or scratch projects. With this option, you can gain approximately 25% in real-time playback performance. You should consider this option if you are working on a relatively slow system.

The **Fixed Bit rate** option allows you to set a fixed bit rate by moving the **Variable** slider. You should use this option if you are concerned with the amount of disk space you want to use. When you choose this option, the Variable slider is activated and you can increase or decrease the bit rate by moving the slider to the right or the left. The range is approximately 10 Mbits/sec - 40 Mbits/sec.

Capturing Video

After setting up the DV Analog I/O for video input and activating the Dazzle capture settings, you can capture video as follows:

1. If you are using a camcorder and capturing from a previously recorded tape, set the camcorder to Video Tape Recorder mode. If you want to capture live video from the camcorder, set it to Camera mode.

   Note: If you are capturing analog video, be sure the Adobe Premiere Capture format specifies **Dazzle Analog Record**, as explained earlier in this section.

   For analog video captures, the DV Analog I/O converts the analog video to Dazzle format. For DV captures, DV passes through the DV Analog I/O. After the capture operation, the video is stored on your computer's hard disk.

2. Begin playing the video on your source device.

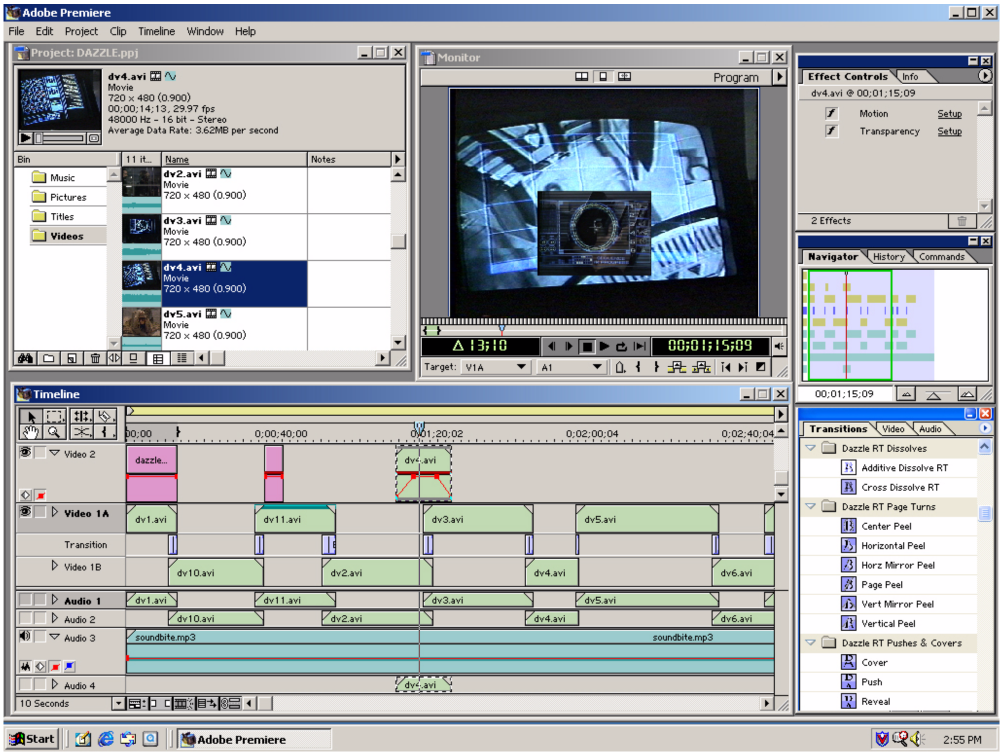
   The video appears in the Adobe Premiere Monitor window and the audio plays on your computer's speakers. If an external monitor is connected, the audio and video also play on the monitor.

3. Go to the point on the tape where you want to begin capturing and click the **Record** button in the Premiere Movie Capture window.
4. To end the capture, press the <**Escape**> key on your keyboard or click the Premiere **Record** button once more.

For complete instructions on capturing video, see your *Adobe Premiere User Guide*.

Editing Video

Now that you've captured your video, you can start using the Dazzle Real-Time editing features. Cut out unwanted scenes, splice together different clips and add special effects like titles, transitions, voiceovers and background music.



Configuring the Dazzle Real-Time Editing Settings

When you choose the **Dazzle - Real-Time** preset in the Load Project Settings window (or choose the **Dazzle Real-Time** editing mode, as explained below), you can playback your edited video in real time (depending on CPU usage, as explained on page 30).

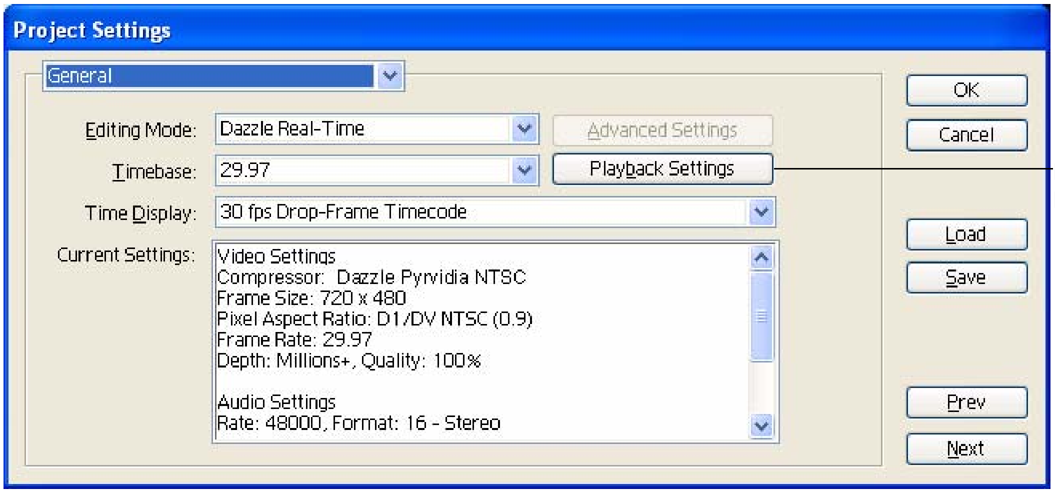
To edit video in real time, the General Settings must be configured for **Dazzle RT**.

1. Choose **Project Settings** from the Premiere Project Menu, then click **General** in the pop-up menu.

The Project Settings dialog box displays the General settings. The **Editing Mode** is set for **Dazzle Real-Time**, as defined by the Dazzle - Real-Time preset. This mode is required for real-time editing and playback.

Note: In Dazzle Real-Time Editing mode, you cannot output DV directly to a DV camcorder or VCR. If you want to output to a DV device, you must use the analog inputs on the DV device. If you want to output DV directly to the DV device, you must render your project and change to DV Playback mode before the output process.

Note: When you change the editing mode, Premiere deletes all your previously rendered segments. Although the project still appears in the Timeline, a red bar appears above all the previously rendered segments, indicating that re-rendering is now required. For this reason, you should not change modes for projects near completion, and in any case, you should avoid changing the editing mode more than one time.



Project Settings

General

Editing Mode: Dazzle Real-Time

Timebase: 29.97

Time Display: 30 fps Drop-Frame Timecode

Current Settings:

Video Settings
Compressor: Dazzle Pyrvidia NTSC
Frame Size: 720 x 480
Pixel Aspect Ratio: D1/DV NTSC (0.9)
Frame Rate: 29.97
Depth: Millions+, Quality: 100%

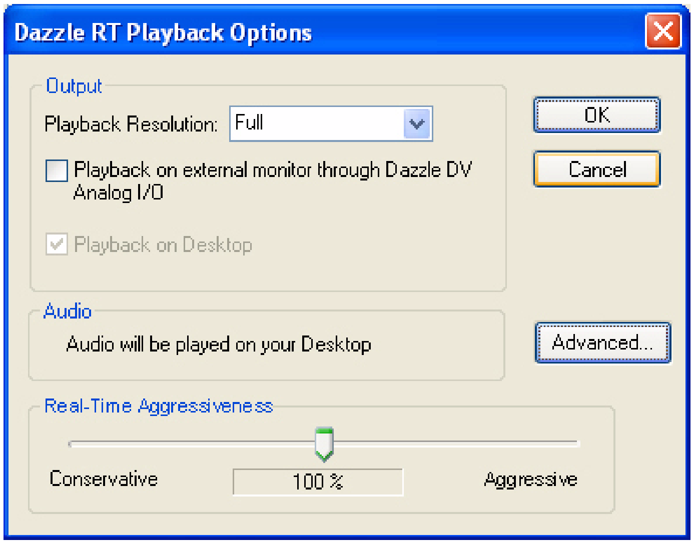
Audio Settings
Rate: 48000, Format: 16 - Stereo

Playback Settings Button

2. Click the **Playback Settings** button.

   The Dazzle RT Playback Options window appears

   In this window, you can choose the playback resolution, activate playback on an external monitor through the DV Analog I/O breakout box, configure the **Real-Time Aggressiveness** setting, and configure the Dazzle RT Playback **Advanced** settings.



Dazzle RT Playback Options

Output

Playback Resolution: Full

☐ Playback on external monitor through Dazzle DV Analog I/O

☑ Playback on Desktop

Audio

Audio will be played on your Desktop

Real-Time Aggressiveness

Conservative 100 % Aggressive

Following is a description of each Dazzle RT Playback Option:

Playback Resolution

Specifies whether to playback your edited video at **Full**, **Half**, or **Adaptive** resolution. For real-time playback of your edited video, Half consumes less CPU power than Full. For this reason, the Half option may provide real-time playbacks for some segments that do not preview in real time using the Full option, for example if you are working on a slow system or with complex layers.

The Adaptive option determines whether to playback in Full or Half resolution, based on the size of the Adobe Premiere Monitor window. By reducing the size of the Monitor window, you may be able to enable real-time playback of video segments in full resolution that only playback in Half resolution in a larger window. With Adaptive resolution, you can toggle back and forth between Full and Half resolution by changing the window size, instead of manually changing these resolution options.

Note: Rendering is always performed in full resolution.

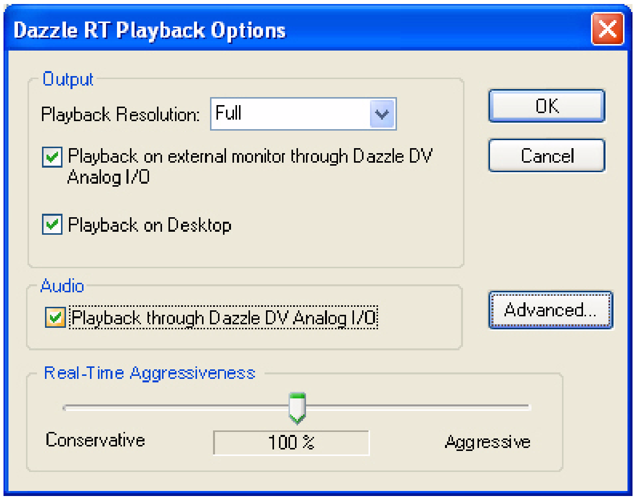
Playback on external monitor through DV Analog I/O

Specifies whether to playback your edited video on an external monitor using the DV Analog I/O's analog video outputs. This option is convenient, but consumes additional CPU power.

Playback on Desktop

When **Playback on external monitor through DV Analog I/O** is enabled, the **Playback on Desktop** option allows you to enable/disable video playback in the Premiere Monitor window and you can also enable/disable audio playback through the DV Analog I/O (to your external monitor).

Note: In some cases, disabling the Monitor window when outputting to tape may increase system performance.



Playback Resolution: Full

☑ Playback on external monitor through Dazzle DV Analog I/O

☑ Playback on Desktop

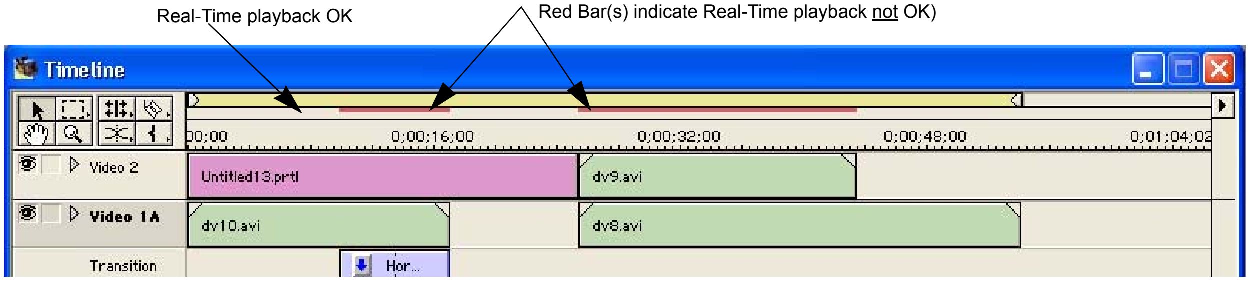
☑ Playback through Dazzle DV Analog I/O

Conservative 100 % Aggressive

Real-Time Aggressiveness

You can use this setting to fine-tune the Dazzle real-time scoring function. Real-Time scoring predicts whether video segments in the Premiere timeline will playback in real time, based on your computer's CPU usage. When Real-Time Aggressiveness is configured correctly, a red bar appears above any segments that will not playback in real time. For example, if a transition, video effect, or other variable will drop the frame rate below your video standard, a red bar appears above that segment in the timeline (see the example below).

Note: Only the Dazzle Transitions and Video Effects will playback in real time.



Real-Time playback OK

Red Bar(s) indicate Real-Time playback not OK)

In some cases, real-time scoring may not accurately predict the real-time playback feasibility. For example, the score for a specific video segment may predict real-time playback but the segment does not playback as predicted. In this case, you should move the **Real-Time Aggressiveness** slider (in the Dazzle RT Playback Options window) to the left for a more conservative prediction. In other cases, the score for a specific segment may indicate that real-time playback is not possible (red bar), but the segment does playback in real time. In this case, you should move the **Real-Time Aggressiveness** slider to the right for a more aggressive prediction. If you move the slider all the way to the left, all transitions and effects will be marked with a red bar to indicate that rendering is required. If you move the slider all the way to the right, a red bar will never indicate that rendering is required. However, no matter how you configure real-time aggressiveness, the system always attempts to playback video in real time and often succeeds. When a video segment cannot playback in real time, it plays with a drop in the frame rate. After gaining some experience with this setting, you can fine-tune the scoring sensitivity for your computer and work habits.

Note: If a video segment does not playback in real time, you need to manually render that segment to make it play smoothly. After rendering, a green bar appears above the segment in the timeline.

Dazzle RT Playback Advanced Settings

Click the **Advanced** button in the Dazzle RT Playback options window.

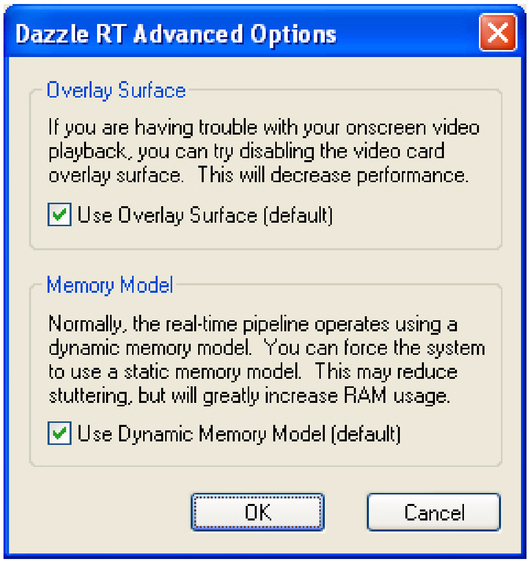
The **Overlay Surface** and **Memory Model** settings appear. Following is a description of each of these settings:

Overlay Surface

If you experience onscreen video playback problems, disabling your video card's overlay surface may help, but results in decreased performance. To disable the default setting, uncheck **Use Overlay Surface (default)** by clicking in the corresponding box, then click **OK.** To re-enable this setting, re-check the box and click **OK.**

Memory Model

If "stuttering" occurs during playback, switching to a static memory model instead of the default dynamic memory model may help, but results in a large increase in RAM usage. To use a static memory model, uncheck **Use Dynamic Memory Model (default)** by clicking in the corresponding box, then click **OK.** To restore the default setting, re-check the box and click **OK.**



If you are having trouble with your onscreen video playback, you can try disabling the video card overlay surface. This will decrease performance.

☑ Use Overlay Surface (default)

Normally, the real-time pipeline operates using a dynamic memory model. You can force the system to use a static memory model. This may reduce stuttering, but will greatly increase RAM usage.

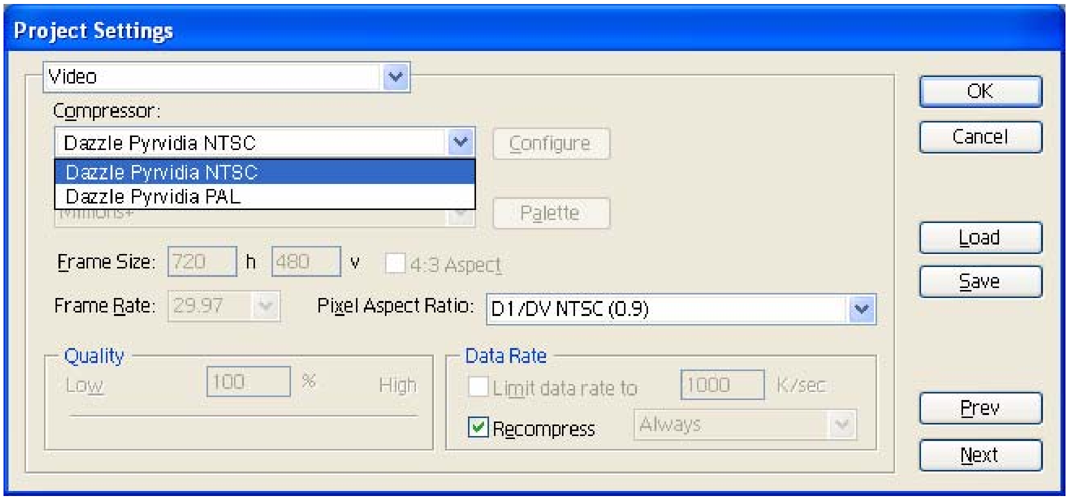
☑ Use Dynamic Memory Model (default)

Configuring the Dazzle Real-Time Video Settings

In Dazzle RT Editing mode, you can configure the Premiere **Video** settings as follows:

Choose **Project Settings** from the Premiere Project Menu, then click **Video** in the pop-up menu.

The Project Settings dialog box displays the current Video settings.



Video

Compressor: Dazzle Pyrvidia NTSC
Dazzle Pyrvidia NTSC
Dazzle Pyrvidia PAL

Frame Size: 720 h 480 v ☐ 4:3 Aspect

Frame Rate: 29.97 Pixel Aspect Ratio: D1/DV NTSC (0.9)

Low 100 % High

☐ Limit data rate to 1000 K/sec

☑ Recompress Always

The compressor setting specifies the type of compression used for real-time editing/playback. The Compressor drop-down menu displays two options: **Dazzle NTSC** and **Dazzle PAL**.

In this window, you can also set the Pixel Aspect Ratio. For more information on changing the Pixel Aspect Ratio, *see your Adobe Premiere User Guide*.

Using the Dazzle Transitions and Effects

When you use Adobe Premiere with the Dazzle transitions and effects, you can playback your edited video in real time.

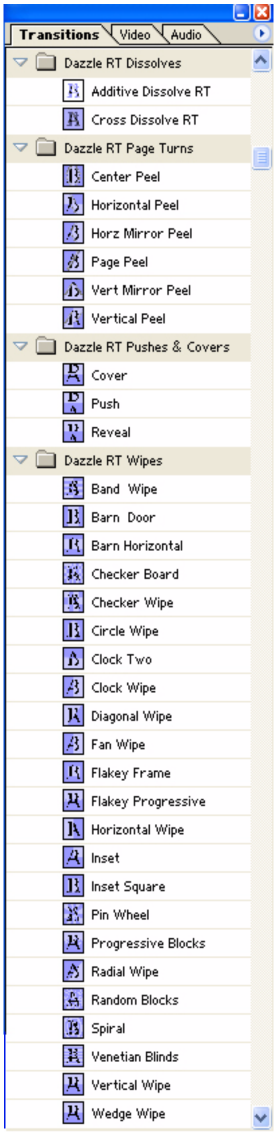
To choose a Dazzle transition that you can preview in real time, follow these steps:

1. Click the **Transitions** tab in the Premiere Transitions and Effects palette (or choose **Show Transitions** in the Premiere Window menu).

   The Premiere Transitions palette appears.

   The Dazzle transitions appear in four categories in the Transitions drop-down menu: **Dazzle RT Dissolves**, **Dazzle RT Page Turns**, **Dazzle RT Pushes and Covers**, and **Dazzle RT Wipes**.

2. Select the desired Dazzle transition.



To choose a Dazzle effect that you can preview in real time, follow these steps:

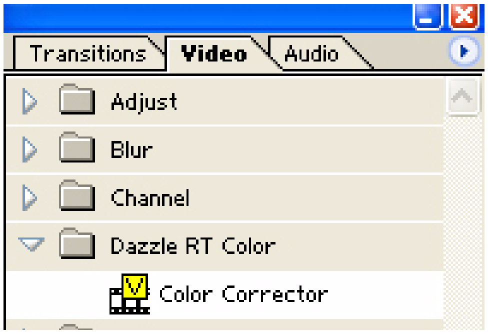
1. Click the **Video** tab in the Premiere Transitions and Effects palette (or choose **Show Video Effects** in the Premiere Window menu).

   The Premiere Video Effects palette appears.

2. Click the **Dazzle** tab in the Video Effects palette.

   Currently one Dazzle Effect appears in the drop-down menu, **Dazzle RT Color Corrector**.

3. Select the Dazzle Effect.



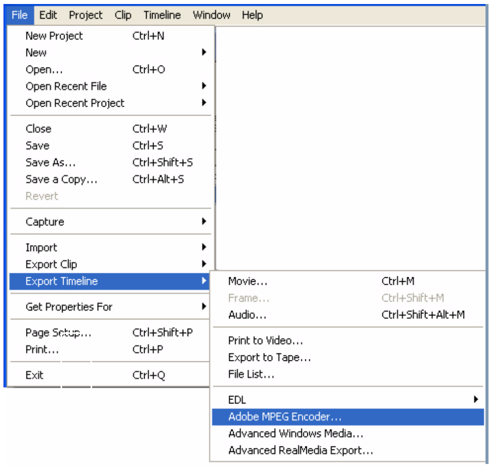
You can toggle back and forth between the Transitions and Video Effects palettes by clicking on the corresponding tabs.

For basic information on adding transitions and effects to your project and editing video, see your *Adobe Premiere User Guide*.

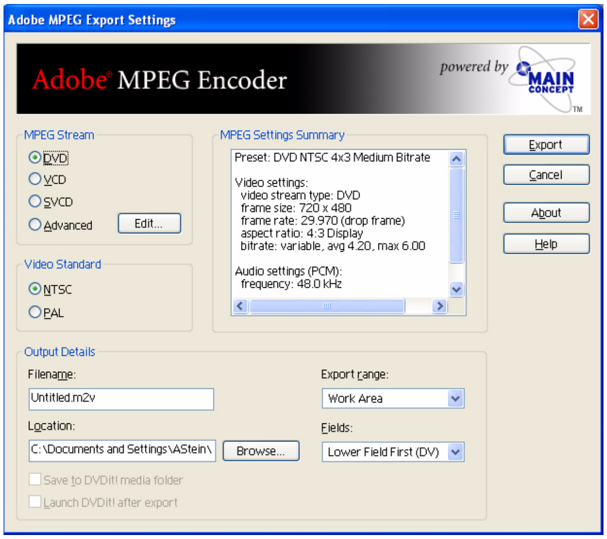
Creating DVDs and VCDs

To create a DVD or VCD, begin by exporting your project to MPEG-2 format as follows (for detailed instructions, see your *Adobe Premiere User Guide*):

1. Choose **Export Timeline** from the Premiere File menu, then click **Adobe MPEG Encoder** in the pop-up menu.



The Adobe MPEG Encoder window appears. In this window, you can configure the MPEG encoder settings.



MPEG Stream
● DVD
○ VCD
○ SVCD
○ Advanced

MPEG Settings Summary

Preset: DVD NTSC 4x3 Medium Bitrate

Video settings:
video stream type: DVD
frame size: 720 x 480
frame rate: 29.970 (drop frame)
aspect ratio: 4:3 Display
bitrate: variable, avg 4.20, max 6.00

Audio settings (PCM):
frequency: 48.0 kHz

Video Standard
● NTSC
○ PAL

Output Details

Filename: Untitled.m2v

Location: C:\Documents and Settings\AStein\

Export range: Work Area

Fields: Lower Field First (DV)

☐ Save to DVDit! media folder
☐ Launch DVDit! after export

2. Configure the MPEG encoder settings for your desired format, enter a file name and a location, and then click the **Export** button.

   Now you can open your exported project in DVD Complete Deluxe and create a DVD or VCD. For detailed instructions, see the provided *DVD Complete User's Guide*.

Outputting Video

This section explains how to output your edited video to a DV or analog camcorder or VCR, so you can create customized video tapes. You'll learn how to set up the DV Analog I/O breakout box (referred to as DV Analog I/O) for DV or analog video output and convert your edited video. Before you start outputting, make sure that the DV Analog I/O is connected to your computer and powered up. Then follow the procedures below.

Note: In Dazzle - Real-Time Editing mode, you cannot output DV directly to a DV camcorder or VCR. If you want to output to a DV device in Dazzle - Real-Time mode, you must use the analog inputs on the DV device. If you want to output DV directly to the DV device, you must render your project and change to DV Playback mode before the output process.

Connecting Analog Video Output

Note: If you have an optional preview monitor connected, you must disconnect it to attach the camcorder or VCR that you want to record to. However, you may be able to connect it to the output device as described on page 39.

1. Connect one end of an RCA (composite) video cable (yellow) or S-video cable (black) to the corresponding Video Out connector on the back of the DV Analog I/O.

   Note: S-Video provides higher quality video output than composite video and should be used if your camcorder or VCR has an S-Video connection.

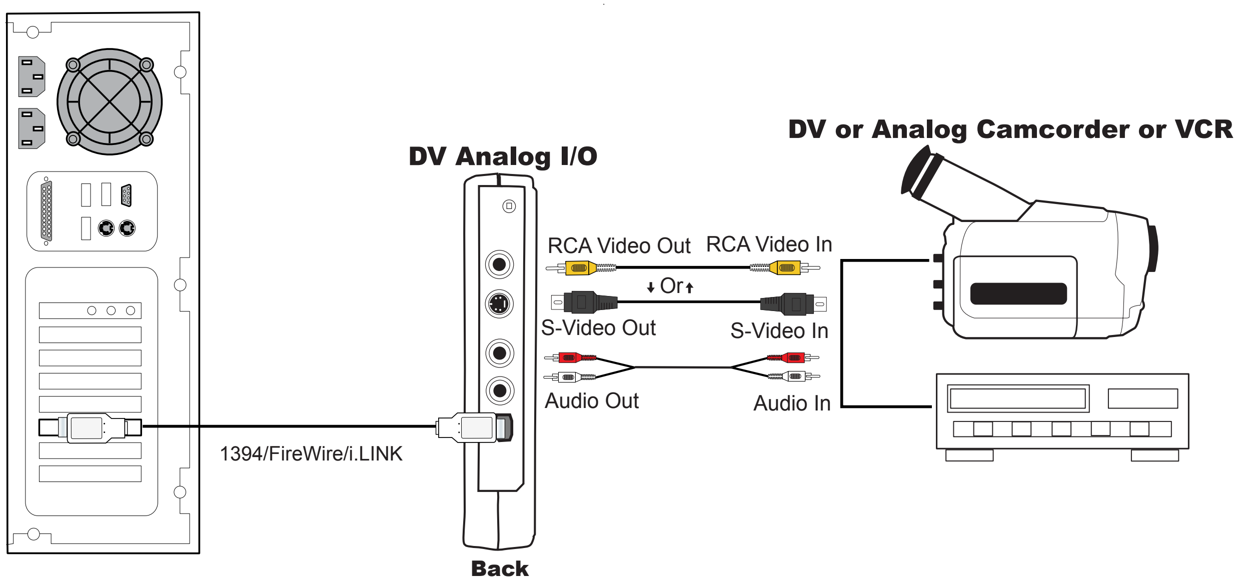
2. Connect the other end of the video cable to the corresponding Video In connector on the camcorder or VCR.

   Note: Some analog camcorders do not have inputs. Consult your camcorder's documentation for details on your specific model.

3. Connect an RCA audio cable (red and white) from the Audio Out connectors on the back of the DV Analog I/O to the Audio In connector(s) on the camcorder or VCR.

   Note: Your audio cable may have separate connectors for left and right, or the connectors might be joined as shown in the illustration on the next page. Remember that you need to use a Y-adapter if the camcorder or VCR only supports mono input.

The illustration on the next page shows the above configuration.



IMPORTANT: Make sure that the camcorder or VCR is set up properly to receive a video signal. It might be necessary to set a camcorder to VTR mode, while a VCR might need to be set to “Line In,” “L1,” “L2,” “Aux” or a similar channel. Check the camcorder or VCR’s documentation for specific details.

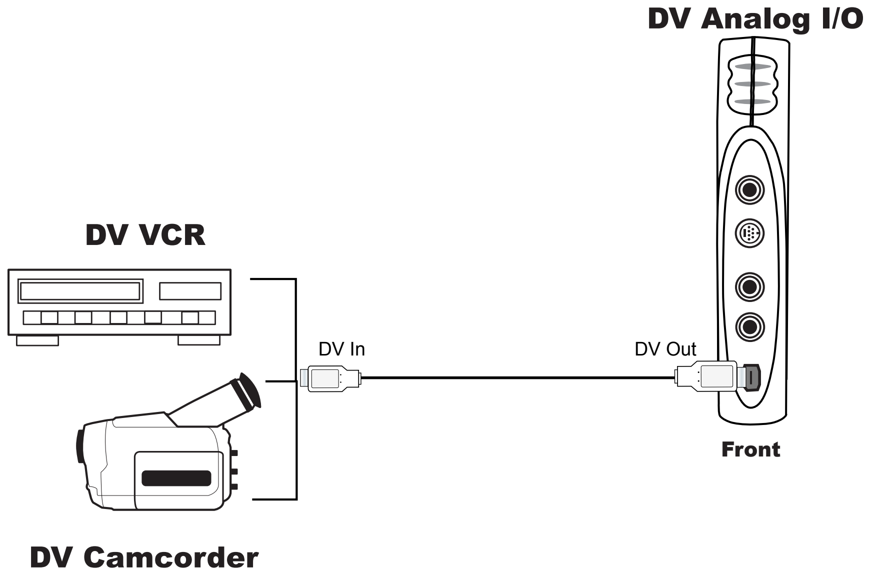
Connecting DV Output

If you have a DV camcorder or VCR, there may be times when you want to output DV from your computer to the digital camcorder or VCR. Since no conversion is performed, it is not necessary to use the DV Analog I/O for this process. You can connect your DV device directly to your PC. However, it may be more convenient to output through the DV Analog I/O. If your computer is in an out-of-the-way location, you may find it easier to simply connect the DV device to the DV Analog I/O as follows:

Note: This configuration does not function in Dazzle - Real-Time Editing mode, as explained on page 36.

1. Connect one end of a 1394/FireWire/i.LINK cable to the 1394 connector on the front of the DV Analog I/O.
2. Connect the other end of the cable to the DV connector on the DV camcorder or VCR.

   Note: This is the same setup used for capturing DV. If you have already made the connection for capturing, it is not necessary to change it. In this case, the 1394 cable handles input and output.



Connecting an Optional Preview Monitor

Analog or DV Output Configurations

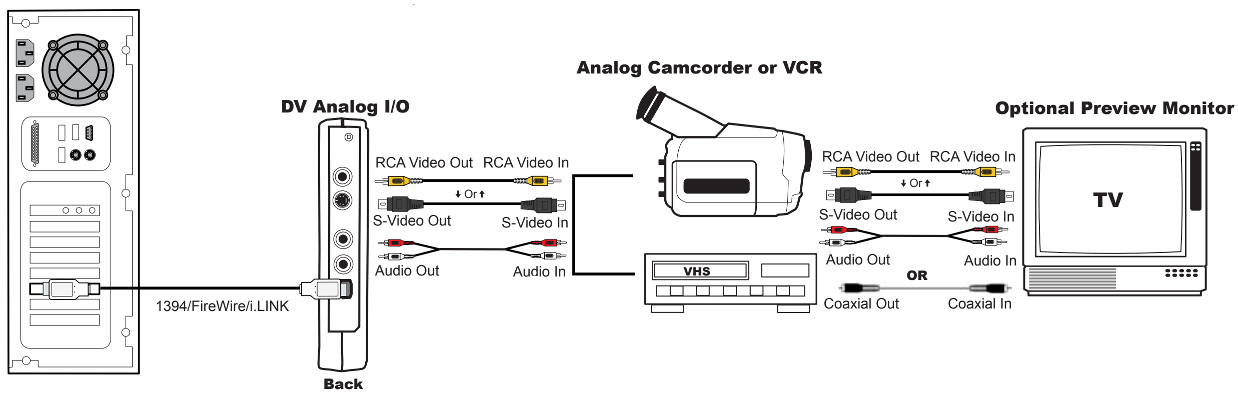
During analog output or DV output (with an analog output device connected), if the connectors on your camcorder or VCR and your monitor are compatible, you can connect a preview monitor as follows:

1. Connect one end of an RCA (composite) video cable (yellow) or S-Video cable (black) to the Video Out connector on the camcorder or VCR.
2. Connect the other end of the cable to the Video In connector on the TV monitor.
3. Connect an RCA audio cable (red and white) from the Audio Out connectors on the back of the camcorder or VCR to the Audio In connector(s) on the monitor.

   Note: Your audio cable may have separate connectors for left and right, or the connectors might be joined as shown in the illustration below. Remember that you need to use a Y-adapter if your monitor only supports mono input.

   If the TV monitor does not support the kinds of cables shown below, you may be able to connect it using a coaxial cable. Many VCRs and most TVs have this kind of connector, and many VCRs come with a coaxial cable.

   Connecting the TV monitor to the camcorder or VCR results in the configuration shown below



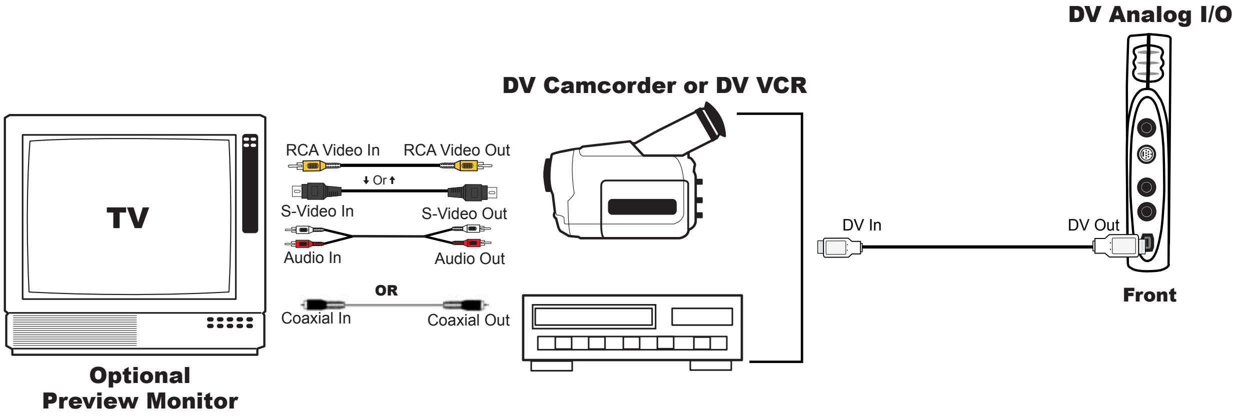
IMPORTANT: Make sure that the camcorder or VCR and monitor are set up properly to receive a video signal. It might be necessary to set a camcorder to VTR mode, while a VCR or monitor might need to be set to “Line In,” “L1,” “L2,” “Aux” or a similar channel. Or, if a monitor is connected to a VCR with a coaxial cable, you might need to set the monitor to channel 3 or 4. Check each device’s documentation for specific details.

DV Output Configurations

When outputting DV, you can connect a preview monitor as follows:

1. Connect an RCA video cable (yellow) or S-Video cable (black) from the Video Out connector on the camcorder or VCR to the Video In connector on the TV monitor.
2. Connect an RCA audio cable (red and white) from the Audio Out connectors on the back of the camcorder or VCR to the Audio In connector(s) on the monitor.

   Note: Your audio cable may have separate connectors for left and right, or the connectors might be joined as shown in the illustration below. Remember that you will need to use a Y-adapter if the monitor only supports mono input.



If the TV monitor does not support the kinds of cables shown above, you might be able to connect it using a coaxial cable. Many VCRs and most TVs have this kind of connector, and many VCRs come with a coaxial cable.

IMPORTANT: Make sure that the camcorder or VCR and monitor are set up properly to receive a video signal. It might be necessary to set a camcorder to VTR mode, while a VCR or monitor might need to be set to “Line In,” “L1,” “L2,” “Aux” or a similar channel. Or, if a monitor is connected to a VCR with a coaxial cable, you might need to set the monitor to channel 3 or 4. Check each device’s documentation for specific details.

Outputting Video

For basic instructions on outputting your DV or analog video to a camcorder or VCR, see your *Adobe Premiere User Guide*.

Note: In Dazzle - Real-Time Editing mode, you cannot output DV directly to a DV camcorder or VCR. If you want to output to a DV device in Dazzle - Real-Time mode, you must use the analog inputs on the DV device. If you want to output DV directly to the DV device, you must render your project and change to DV Playback mode before beginning the output process.

Troubleshooting

Frequently Asked Questions

If you experience difficulties with your Real-Time Video Producer, please check the troubleshooting section below for possible solutions. If the problems persist, please go to page 44 of this user's guide for information on contacting Dazzle Technical Support.

How do I increase my computer system's resources for optimal video performance?

1. Enable Direct Memory Access (DMA).

- Right-click on **My Computer**
- Select **Properties** in the drop-down menu
- Select the **Hardware** tab
- Click the **Device Manager** button
- Click the **+ IDE ATA\ATAPI\controllers** item
- Double-Click the **Primary IDE Channel** item
- Click the **Advanced Settings** tab
- Click the **Device 0 Transfer Mode** box
- Select the **DMA if available** tab
- Click the **Device 1 Transfer Mode** box
- Select the **DMA if available** tab
- Click the **OK** button
- Double-Click the **Secondary IDE Channel** item
- Repeat the above steps performed for the Primary IDE Channel, then restart.

2. Get the latest **Video Adapter** Drivers.

3. Get the latest **DirectX** Drivers and Digital Video Capture Update from Microsoft.

4. Get the latest motherboard chipset drivers and bios.

5. Delete **Temporary Files**.

6. Lower **Screen Resolution** and **Color Depth** to a maximum of 1024 x 768 24-bit.

7. Update Windows.

8. Update Windows Media Player.

9. Turn off the Windows Screen Saver.

- Right click on the Desktop.
- Select **Properties**.
- Select **Screen Saver**.

10. Close all other Applications (not for Windows 2000).

- Press <**Ctrl-Alt-Delete**> on your keyboard. The Close Program dialog box appears.
- Select a program other than Explorer and Systray.
- Click **End Task**.
- Repeat the above steps until Explorer and Systray are the only two open programs.

11. Run a disk defragmenting program to speed up your computer's data access functions.

- Click **Start**.
- Click **Programs**.
- Click **Accessories**.
- Click **System Tools**.
- Click **Disk Defragmenter**.

12. Disable **Windows Visual Effects**.

Windows XP only:

- Open the **System Properties**.
- Click the **Advanced** tab.
- Click the **Performance - Settings** button.
- Click the **Adjust for best performance** radio button.
- Click **OK**.
- Click **OK**.

13. Set the Windows Virtual Memory.

Windows XP only:

- Right-click on **My Computer**.
- Select **Properties**.
- Click the **Advanced** tab.
- Click the **Settings** button under **Performance**.
- Click the **Advanced** tab.
- Click the **Change** button under **Virtual memory**.
- Enter 1.5 times the amount of physical memory (RAM) installed on your PC for **Initial Size** and **Maximum Size**.
- Click the **Set** Button.
- Click **OK** three times.

I cannot read the electronic users' guides.

Make sure the Acrobat 5 reader is installed on your system. If the Acrobat 5 reader is not installed, use the Adobe Premiere 6.5 Installation disk to install it.

I accidently pressed the Firmware Reset Switch on the DV Analog I/O breakout box, and now I can't capture or output video.

You must not press the Firmware Reset Switch unless you are following the directions included with a Dazzle firmware update*. Improper use of the Firmware switch renders the DV Analog I/O breakout box inoperable, as indicated by the middle LED flashing on and off or by all the LEDs turning off. In such a case, follow these steps to re-enable the hardware:

1. Disconnect the 1394 cable from the DV Analog I/O breakout box.
2. Press and hold the Firmware Reset Switch.
3. Reconnect the 1394 cable to the DV Analog I/O breakout box.

   The middle LED starts flashing.
4. When the middle LED stops flashing, release the Firmware Reset Switch.
5. Disconnect the 1394 cable from the DV Analog I/O breakout box, and then reconnect it.

   The DV Analog I/O breakout box should now function properly.

*Check for DV Analog I/O firmware updates on the Dazzle website (see below).

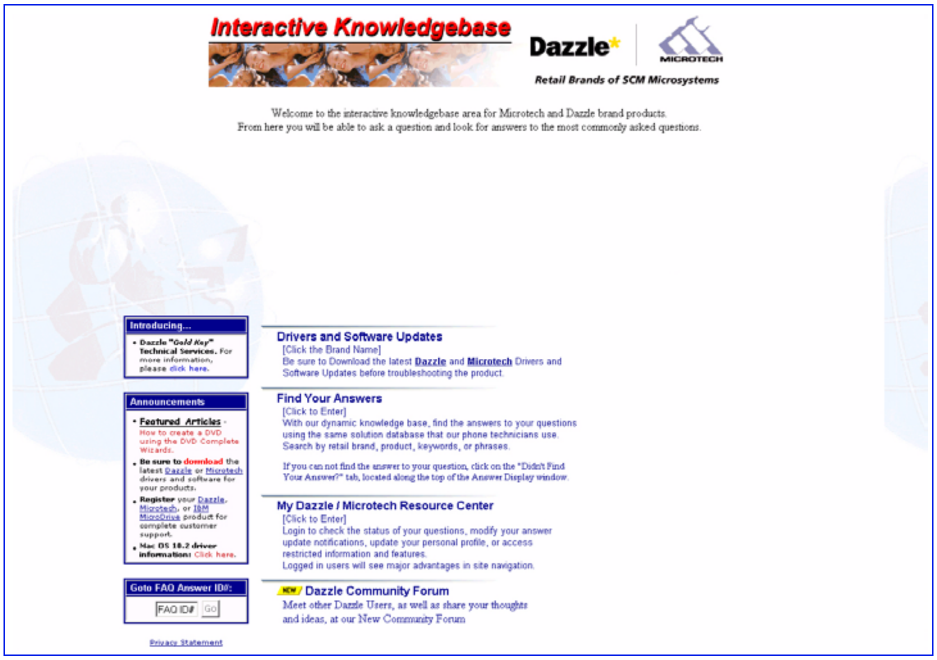
For more troubleshooting tips, please visit the Dazzle Interactive Knowledgebase at www.Dazzle.com. Begin by clicking the **Support** link, then select **Interactive Support** from the provided menu.

Technical Support

Dazzle Interactive Knowledgebase

The Dazzle Real-Time Video Producer is a video solution designed for video professionals who demand performance and quality. Because this product is designed for the video professional, technical assistance for this product should be obtained from your dealer.

Product information and technical assistance for the Dazzle Real-Time Video Producer can also be found in the Dazzle Interactive Knowledgebase. Visit www.Dazzle.com, click the **Support** link, and then select **Interactive Support** from the provided menu. E-mail support is also available via our Interactive Knowledgebase.



Welcome to the interactive knowledgebase area for Microtech and Dazzle brand products.
From here you will be able to ask a question and look for answers to the most commonly asked questions.

- Dazzle "Gold Key" Technical Services. For more information, please click here.

- Featured Articles - How to create a DVD using the DVD Complete Wizards.
- Be sure to download the latest Dazzle or Microtech drivers and software for your products.
- Register your Dazzle, Microtech, or IBM MicroDrive product for complete customer support.
- Mac OS 10.2 driver information: Click here.

Drivers and Software Updates
[Click the Brand Name]
Be sure to Download the latest Dazzle and Microtech Drivers and Software Updates before troubleshooting the product.

Find Your Answers
[Click to Enter]
With our dynamic knowledge base, find the answers to your questions using the same solution database that our phone technicians use. Search by retail brand, product, keywords, or phrases.

If you can not find the answer to your question, click on the "Didn't Find Your Answer?" tab, located along the top of the Answer Display window.

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Logged in users will see major advantages in site navigation.

Dazzle Community Forum
Meet other Dazzle Users, as well as share your thoughts and ideas, at our New Community Forum

If for some reason you are unable to contact your dealer or have been unable to find the answers to your questions in either the Dazzle Interactive Knowledgebase or via our E-mail service, you may contact Dazzle directly at **866-723-2719**. Such calls will be subject to a per-call service fee.

For current pricing on Dazzle Professional Series product support, please visit www.Dazzle.com/prosupport.html

For Dazzle Real-Time Video Producer customers within the U.K, please contact the local Technical Resource Center at **09062 160 180** (25p/Min).